WESTERN BIRDS

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NONPASSERINE SPECIES NEW OR UNUSUAL TO NEVADA

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During the past several years observers in Nevada have discovered many nonpasserine species not previously known to occur in the state. Many species unusual to Nevada have also been reported. A few records have been reported in ornithological journals. Most, however, have been reported as sightings in *Audubon Field Notes/American Birds* with the comment "details to be published elsewhere." This note presents the details and any documentation obtained for those sightings.

Unless otherwise indicated, all records are from Clark County, Nevada. All photographs were taken by the author unless otherwise credited. Species identification of all photographic records has been verified by Joseph Jehl, Jr. and/or Guy McCaskie of the San Diego Natural History Museum, San Diego, California. Unless otherwise stated, specimens, original color transparencies and/or black and white negatives and prints of all photographic records are deposited in the University Museum of Biology (UNMB), University of Nevada, Reno, in Reno, Nevada. Reference will also be made to specimens housed in the Nevada State Museum (NSM), Carson City, Nevada, the Museum of Vertebrate Zoology (MVZ), University of California, Berkeley and the University of Nevada, Las Vegas (UNLV-B). Personal observations are indicated by initials CSL.

SPECIES ACCOUNTS

ARCTIC LOON, *Gavia arctica.* I photographed one 19 October 1976 at Tule Springs Park 23 km northwest of Las Vegas (Figure 1). Though the species has occurred in small numbers at Lakes Mead and Mohave almost annually since 1971, documentation has not been obtained. These lakes, which annually attract large numbers of water associated birds, are totally within the boundaries of the Lake Mead National Recreational Area and collecting is forbidden. Approaching this species (and most others) by boat, close enough for adequate photography, is difficult.

This photographic record is the first documented record for Clark County and appears to be the fourth Nevada record.

Figure 1. Arctic Loon *(Gavia arctica)*, Tule Springs Park, Las Vegas, Clark Co., Nevada, 19 October 1976.

Figure 2. Horned Grebes *(Podiceps auritus)* and Eared Grebe *(P. nigricollis)*, Las Vegas Bay, Lake Mead, Clark Co., Nevada, 12 December 1974.

Individual dead birds have been found at two Nevada locations. Baine Cater found a freshly killed bird at Ruby Lakes, Elko County, 21 October 1950 (Wilson and Norr 1951). It is not known if the remains were salvaged as a specimen. The remains of an immature were found at Soda Lake, Churchill County, 9 April 1950 (Marshall 1951) and were retained in Marshall's personal collection.

The report (Deming 1963) of a specimen taken in Nye County by Thomas Imhof 26 October 1951 is in error. Imhof (pers. comm.) states he picked up a live bird from Yucca Lake at the Nevada Test Site. The lake bed, normally dry, was covered with about 3 cm of water. The bird was briefly examined and then released in an area of the lake containing deeper water.

RED-THROATED LOON, *G. stellata.* While conducting a Christmas Bird Census 21 December 1969 Ken King and I discovered two in Las Vegas Bay, Lake Mead. One was studied by 15x60 telescope from a distance of about 50 m. The other was observed from a boat at a distance of 15-18 m. The water was flat calm, the sky was clear and the sun was behind us. The following description, applicable to both birds, was obatined:

> About twice the size of nearby Eared Grebes *(Podiceps nigricollis).* Bills thin and grayish, with the lower mandible slightly upturned near the tip. Nostrils barely discernible, apparently covered with skin. Forehead, crown and hindneck bluish-gray with some light whitish edgings. Chin, cheeks, and underneck grayish-white to the waterline. Eye dark brown and positioned almost entirely within the whitish portion of the face. Back, scapulars and wing coverts brownish-gray, thickly covered with small whitish spots, heaviest on the scapulars and wing coverts.

One of the two birds was apparently a juvenile. This bird was as described above except there were brownish streaks on the side of the neck and the spotting on the back, scapulars and wing coverts were grayish, narrow and appeared to form small V's.

Subsequently, I observed an individual at Boulder Beach, Lake Mead, 1 October 1971. Bill Fiero and I observed four individuals 18 December 1971 in Las Vegas Bay, Lake Mead. George Austin and Scott Miller observed an individual in Las Vegas Bay, Lake Mead, 24 November 1975. Only one of these individuals was observed to take flight from the water. On 18 December 1971 Bill Fiero and I observed an individual rise almost vertically from the water rather than running along the surface before taking flight. Flight was low, direct and swift.

The most useful field marks were the small size, light coloration, extensive spotting on the back, scapulars, wing coverts and the location of the eye in the whitish portion of the face. Bill shape is a relatively poor field mark. These are the first Nevada records.

HORNED GREBE, *Podiceps auritus.* Sightings of this species have been recorded in Nevada since the late 1860s (Ridgway 1877; Linsdale 1936, 1951). The species appears on the hypothetical list of Austin and Bradley (1971) for Clark County. There is a specimen in the Lake Mead National Recreational Area collection, but there are no data on the tag.

I have recorded this species in southern Nevada in small numbers every year since 1967. On 10 May 1969 in Las Vegas Wash Vince Mowbray and I observed one which was almost totally in breeding plumage. On 16 December 1972 I photographed one among a small group of Eared Grebes in Las Vegas Bay, Lake Mead. Two were photographed at the same site 12 December 1974 (Figure 2).

In northern Nevada, one was found dead 22 January 1961 at Pyramid Lake, Washoe County, by V. K. Johnson (MVZ 142630, female, ova minute, very thin, weight 213.8 g).

These are the first documented Nevada records.

The Horned Grebe in winter plumage appears much like a small, chunky Western Grebe *(Aechmophorus occidentalis)*. The bill of the Horned Grebe is straighter and much heavier than that of the Eared Grebe. The chin, throat, side of face below the eye, side of upper neck and upper chest are all a clean white. These areas are largely a grayish-brown on the Eared Grebe. Behaviorally, the Horned Grebe does not form large rafts of birds as does the Eared Grebe. It is usually found singly or in pairs away from large groups of other grebes.

LEAST STORM-PETREL, *Halocyptena microsoma.* On 12 September 1976 Bill Prange discovered two at the south end of Cottonwood Basin, Lake Mohave. He followed one of the birds by boat for some distance, securing a detailed description.

Larry Johnson found 50-70 individuals resting on the water 14 September about 400 m offshore from Saddle Island in Las Vegas Bay, Lake Mead and put them to flight by directing his boat through the flock. Johnson also secured a written description.

On 17 September I found an individual on Lake Mohave above Davis Dam, and perhaps the same bird 40 minutes later in the turbine discharge basin below the dam. The bird made several circuits of the discharge basin, was seen in both Nevada and in Mohave County, Arizona, and then flew down the river. I also obtained a written description.

In our descriptions all observers agree on the following points: The birds were small, about the size of a swallow but with longer wings, and brownish-black to blackish with no light colored rump patches. They appeared to have no tail; what tail there was appeared rounded, not forked. Flight was very close to the water.

Prange and Johnson described the flight as slow, occasionally bat or moth like. I felt the flight was similar to that of a Least Tern *(Sterna albifrons)*. Prange and I both noted the buffy-rusty greater wing coverts. Only Prange was able to get close enough to see the black feet. I noted the bill and eye were dark brown or blackish.

These are the first Nevada records. They, and several other tropical or pelagic species, were blown inland by hurricane Kathleen which moved northeast from the Pacific Ocean, across Baja California and up the Colorado River valley 10 September 1976. McCaskie (pers. comm.) states 225 Least Storm-Petrels and one dark rumped form of Leach's Storm-Petrel *(Oceanodroma leucorhoa)* were found at Salton Sea, Imperial County, California 13 September.

Significantly, a large storm-petrel with a dark rump and a forked tail was seen at Las Vegas Stadium 11 September during a football game. Though the bird appears on the University of Nevada, Las Vegas game films, the segment is too brief for positive species identification. Observers identified the bird as a Black Storm-Petrel *(O. melania)*, but none of them was aware there is a dark rumped form of Leach's Storm-Petrel.

BROWN PELICAN, *Pelecanus occidentalis.* Terry Peters discovered an immature on 31 August 1975 in Las Vegas Bay, Lake Mead. I photographed presumably the same bird while on a field trip to this locality with Peters and Vince Mowbray on 13 September. There have been more than 20 sightings involving more than 40 individuals in Nevada. In addition to the previous sightings (Lawson 1973a) there were two sightings and one specimen, all of immature birds, in 1976. One was found dead in Las Vegas Wash by George Austin 7 June (UNLV-B 1166, immature, male, no fat, no molt). One landed in a condominium complex in Las Vegas 15 July. This bird was transported to Sea World in San Diego, California. I found one at Ft. Mohave 23 July.

These are the third and fourth documented Nevada records and the first Nevada specimen.

MAGNIFICENT FRIGATEBIRD, *Fregata magnificens.* On 17 September 1976 I photographed an immature soaring above Davis Dam on the Colorado River (Figure 3). This bird was seen both in Nevada and in Mohave County, Arizona. It was in view for about two minutes and then soared off down the river. This is the first documented Nevada record. Previous sightings were reviewed by Lawson (1973a).

CATTLE EGRET, *Bubulcus ibis.* While on a field trip with Vince Mowbray 3 October 1975 I photographed an immature in an alfalfa field near Logandale. Mowbray had discovered the bird the previous day. This small heron-like bird was about 50 cm tall, all white, with a stubby, thick yellow bill and black legs. The feet were not seen.

An immature was found at Mercury Sewage Ponds, Nye County, 10-19 August 1977 and was photographed on 10 August by Richard Castetter (Figure 4).

On 20 November 1977 one landed in the yard of a residence near Blue Diamond Road south of Las Vegas and was killed by a cat. The remains were recovered by W. C. Murdock who gave them to me. It is now C. S. Lawson 71 (adult male, left testis 9x5 mm, no subcutaneous or visceral fat, weight 234.3 g, no molt). The bird was in poor condition, the stomach containing 5 or 6 unidentified *Coleoptera*. The specimens will be deposited at UNMB.

The presence of this species was first discovered by Leon Hill at the Pahranagat National Wildlife Refuge, Lincoln County, in December 1969. He has seen them there almost every winter since that time. Other records are: one adult 7 May 1973, 7-H ranch in Ruby Valley, Elko County, W. H. Mullins; two 9 November 1974, Logandale, Vince Mowbray and John O'Connell; four 4 June 1975, Pahranagat Valley, Lincoln County, CSL; one 19 August 1975, Diamond Valley, Eureka County, J. and E. Eyre; and one 12 May 1976, Overton, Roy Horsley. These are the first Nevada records.

BARROW'S GOLDENEYE, *Bucephala islandica.* While with John O'Connell 5 December 1974 at Davis Dam on the Colorado River, I photographed a flock of 17, of which 10 are shown in Figure 5. Eight were males and all were observed resting, preening and diving in the turbine discharge area below the dam during the hour we were there. The birds, which had been discovered by O'Connell 30 November, were seen both in Nevada and in Mohave County, Arizona.

Figure 3. Immature Magnificent Frigatebird *(Fregata magnificens)*, Davis Dam, Clark Co., Nevada, and Mohave Co., Arizona, 17 September 1976.

Figure 4. Immature Cattle Egret *(Bubulcus ibis)*, Mercury Sewage Ponds, Nye Co., Nevada, 10 August 1977.

Photo by Richard Castetter

Figure 5. Barrow's Goldeneye *(Bucephala islandica)*, below Davis Dam, Clark Co., Nevada and Mohave Co., Arizona, 5 December 1974.

The population continued to increase during December. On 12 December 36 were present including 14 males. Gale Monson and I found 57 including 12 males 17 December. This flock remained at the site during the remainder of the winter, decreasing in number during February 1975. Four were present 20 February 1975, the last date seen.

During the almost three months this flock was present the birds did not join an enormous flock of almost 1100 Common Goldeneye *(B. clangula)* also present in the same general area. The Barrow's Goldeneye remained exclusively in an area below the dam extending from the dam down river about 1.6 km. When approached by fishermen in boats the Barrow's Goldeneye would swim rapidly away to a safe distance, whereas the Common Goldeneye always flew away from boats and could be put to flight by merely opening a car door on the river bank.

I took additional photographs at the same site beginning 28 November 1975 when 14 were present. Again the flock continued to increase in number during December and early January 1976. A peak population of 43 was reached 9 January 1976. Two were present 27 February 1976, the last date seen.

The species appeared at the same site during November 1976. Scott Burge found 5 below the dam 14 November 1976. I photographed 6 including 4 males 24 November. Vince Mowbray found 29 including 10 males 4 January 1977.

Although there have been a few unsubstantiated sightings of individuals or small numbers reported in previous years, these large flocks constitute the first documented Nevada records. During 1974 and 1975 the species was also photographed from the Mohave County, Arizona, side of the river. The species is listed as hypothetical in Arizona (Phillips et al. 1964).

OLDSQUAW, *Clangula hyemalis.* John O'Connell and I discovered a male 23 January 1975 in a lagoon on the Colorado River 10 km below Davis Dam. I photographed the bird on 5 March. This bird remained in that same general area, in winter plumage, for the rest of the year. During the period November 1975-January 1976 it was joined by two other males and two females. All five were present at Davis Dam from 9 January to 25 February. Additional photographs were taken 9 January. One additional individual was found at Laughlin 3 February by Van Remsen.

On 20 November 1975 Tom Harper gave a female Oldsquaw to me. The bird had been killed by a hunter in Las Vegas Wash and was one of two birds present. The bird is now UNLV-B 1157 (ovary nongranular, 7x10 mm, no molt, moderate fat, weight 580.2 g).

I photographed a male and a female at Davis Dam 24 November 1976. There were eight in southern Nevada 4 January 1977. Bill Prange (pers. comm.) stated there were five in Cottonwood Basin, Lake Mohave, and Vince Mowbray reported the three at Davis Dam were still present. These are the first Clark County records.

HARLEQUIN DUCK, *Histrionicus histrionicus.* Hanford (1903) reported "A male was taken at Frankstown near the lake and identified by Mr. Steinmetz." This was the basis for inclusion of this species in *The Birds of Nevada* (Linsdale 1936).

On 24 June 1977 Dave and Karen Galat discovered a male just beginning eclipse in The Needles area at the north end of Pyramid Lake, Washoe County. The bird was resting on shore and was easily approached. Several photographs were taken and Figure 6 was taken on that date. This appears to be the second Nevada record.

SURF SCOTER, *Melanitta perspicillata.* I photographed an immature 5 December 1974 on the Colorado River about 450 m below Davis Dam. The bird was with a flock of 17 Barrow's Goldeneye for the hour John O'Connell and I were there. The bird was discovered by O'Connell 30 November.

Four individuals were observed by George Austin and Scott Miller 24 November 1975 in Las Vegas Bay, Lake Mead. Karl Lawson and I observed three immatures below Davis Dam 28 November 1975. There is only one previous record for Clark County (Austin and Bradley 1971).

BLACK SCOTER, *M. nigra.* San Stiver discovered a male and two females 21 October 1976 at Comins Lake 16 km south of Ely, White Pine County.

On 11 November 1976 Mike Wickersham collected an individual at the Kirch Wildlife Management Area near Sunnyside, Nye County (UNMB 1814, immature female, skull fully ossified, no subcutaneous or visceral fat, weight 631 g). The bird was in extremely poor condition. There was nothing in the stomach. The gizzard contained one snail shell, some sand and a large number of tapeworms. The snail shell and tapeworms were saved for further examination and identification. Very nearly the entire depth of the keel of the sternum protruded above the surface of the pectoral muscle mass. The reproductive tract was completely decomposed. The salt glands were large; right gland was 2.9 cm long and 0.55 cm wide in the anterior one-third with the remainder of the gland being 0.70 cm wide. The specimen was compared with material at MVZ by Ned Johnson and determined to be *M. n. americana.*

There is only one previous sighting of this species in Nevada (Scott 1968). This is the first Nevada specimen.

Figure 6. Male Harlequin Duck *(Histrionicus histrionicus)*, The Needles area, Pyramid Lake, Washoe Co., Nevada, 24 June 1977.

Photo by Karen Hamilton-Galat

ZONE-TAILED HAWK, *B. albonotatus.* On 19 April 1975 John and Kay O'Connell discovered an adult soaring above Mormon Farm 13 km southeast of Las Vegas. They observed the bird for about 30 minutes, taking detailed notes. Subsequently, the bird was seen by Vince Mowbray. I located the bird between Las Vegas Wash and Mormon Farm 21 April and obtained the following description:

> About the size of a nearby Swainson's Hawk *(B. swainsoni).* Top of head gray. Face, back, upper wings, wing linings, chin, throat, stomach, sides, flanks and feathers of tibia slate gray, at times appearing tinted with brown. Underside of primaries and secondaries gray. Wings appeared slim; primaries dark tipped. Tail compressed most of the time; white bands of tail difficult to see at times. Three black bands on tail. Beginning at rump, each succeeding band larger than previous band. Black band near tip of tail wider than the other two combined. Spaces between bands were whitish. Tip of tail a narrow whitish band. Tarsi, feet and bill light gray or yellowish-gray.

When first seen by the O'Connells, the bird was mistaken for a Turkey Vulture *(Cathartes aura)* until it flew overhead. Behaviorally, it was very similar to a Turkey Vulture. However, all observers noticed the bird would occasionally fold the wings partially, forming a triangle and dive-glide toward the ground. This was the only difference noted in the behavior of the two species. The tail of the Zone-tailed Hawk appeared to be more square than that of the Turkey Vulture. This is the first Nevada record.

HARRIS' HAWK, *Parabuteo unicinctus.* I discovered an adult 18 April 1975 soaring over Mormon Farm 13 km southeast of Las Vegas. I observed the bird for about 30 minutes in good light. The following description was obtained:

> Approximately the same size as nearby Swainson's Hawks *(Buteo swainsoni).* Entire head, back, primaries and secondaries dark blackish-brown. Chin, throat, chest, stomach, sides, and flanks dark brown. Wing coverts, wing linings and feathers on the tibia uniform rust. Upper tail coverts, under tail coverts, base and tip of tail white. Sub-terminal band on tail broad and black. Tarsi and feet yellowish.

There were six Swainson's Hawks also soaring over the farm. The Harris' and Swainson's hawks soared in a loose flock from the southern end of the farm area to the northern end, over the Winterwood Golf Course and passed from view still heading north. This is the third Nevada record.

AMERICAN GOLDEN PLOVER, *Pluvialis dominica.* I collected an immature male 3 October 1973 in the lower tailing ponds in Las Vegas Wash about 16 km southeast of Las Vegas. One of two birds present, the specimen is UNMB 1763 (skull not fully ossified, gonads minute, no molt, moderate fat, weight 148.7 g). These birds were discovered 30 September by Vince Mowbray. This is the fourth Nevada specimen.

There are two spring records. On 16 May 1970 John and Glade Koch found one at Mormon Farm, 13 km southeast of Las Vegas. John and Kay O'Connell discovered another 13 April 1975 at the Overton Wildlife Management Area. I have one other fall record 7 October 1976 from Pahranagat National Wildlife Refuge, Lincoln County.

WHIMBREL, *Numenius phaeopus.* Ed Scovill (pers. comm.) photographed one at Boulder Beach, Lake Mead, in August 1968 (date unknown). The original color slide is deposited at UNMB. On 17 April 1975 I photographed an individual (Figure 7) in Logandale in a flooded field where John O'Connell found one 13 April. These are the first documented Nevada records.

Gullion (1952) reported seeing one near Cactus Springs 31 July 1951. There have been eight additional sight records, involving a total of eleven individuals,

since 1970: three 19 April 1970 and one 16 April 1972, Las Vegas Wash, CSL; one 1 May 1973, Fernley, Lyon County, Bob and Jessie Alves; one 28 July 1973, Mormon Farm, Vince Mowbray; two 15 May 1975, Mormon Farm, CSL and John O'Connell; one 26 April 1976, Overton Wildlife Management Area, CSL and Roy Horsley; one 19 August 1976, Lake Mead, Vince Mowbray; and one 7 September 1976, Las Vegas Wash, CSL and Karl Lawson.

UPLAND SANDPIPER, *Bartramia americana.* On 19 April 1970 I discovered an adult in the lower tailing ponds in Las Vegas Wash 16 km southeast of Las Vegas. I observed the bird for about 15 minutes and obtained the following description:

> Slightly smaller than a nearby Greater Yellowlegs *(Tringa melanoleuca)*, the bird appeared to have a small head, short bill, and thin neck and stood very erect. Neck, back, wing coverts, secondaries, chest, sides and flanks uniformly streaked and light brown. Abdomen and undertail coverts white. Head dark brown with a narrow buffy median line and a white spot at the base of the bill. Eye seemingly large, and brown with a white eyering and a high, white post ocular spot. Primaries dark brown with buffy mottling on the outer primary. In flight the rump appeared dark brown. Tail white, barred with dark brown and with a dark central stripe. Tail appeared quite long. Underwing white mottled with brown. Flight stiff and wings held erect on landing. The bird uttered a whistling note twice.

This is the first Nevada record. The species appears on the hypothetical list of Linsdale (1936) on the basis of a set of eggs from Soda Lake, Churchill County, in the Salvin Godman collection of the British Museum. Linsdale (1936) believed this to be a misidentification. An inquiry to the British Museum revealed the eggs are those of an American Avocet *(Recurvirostra americana)*.

Figure 7. Whimbrel *(Numenius phaeopus)*, Logandale, Clark Co., Nevada, 17 April 1975.

PARASITIC JAEGER, *Stercorarius parasiticus*. Vince Mowbray, Terry Peters and I discovered an immature chasing Ring-billed Gulls *(Larus delawarensis)* in Las Vegas Bay, Lake Mead, 13 September 1975. Pursuing the bird by boat I was able to take a series of photographs of the bird as it harrassed the gulls. One fuzzy photograph was obtained of the two species in the same picture. The jaeger appeared to be the same size as the gull.

I found another immature at Davis Dam 17 September 1976. This bird was seen both in Nevada and in Mohave County, Arizona. Vince Mowbray found another immature at Boulder Beach, Lake Mead, 14 November.

While with Mowbray 24 November I obtained an extensive series of photographs, both color and black and white, of an immature as it harrassed a mixed flock of Ring-billed and California *(L. californicus)* gulls (Figure 8). This individual and the one seen on 17 September both were observed at such close range that the spiky appearance of the rectrices and the outer three primaries could be clearly seen. These feathers appear rounded in the Long-tailed Jaeger *(S. longicaudus)*. In northern Nevada, Dave Galat found an immature at Pyramid Lake, Washoe County 6 September 1976. These are the first Nevada records.

GLAUCOUS-WINGED GULL, *L. glaucescens*. Vince Mowbray and I found a typically plumaged second year Glaucous-winged Gull in the turbine discharge

Figure 8. Immature Parasitic Jaeger *(Stercorarius parasiticus)*, Boulder Beach, Lake Mead, Clark Co., Nevada, 24 November 1976.

area below Davis Dam on the Colorado River 9 January 1976. The bird was feeding with a small flock of California and Ring-billed gulls and was seen in Nevada and in Mohave County, Arizona. A series of photographs was taken (Figure 9). This is the second documented Nevada record.

Previous Nevada records are discussed by Lawson (1973b). I have three other records involving four individuals: two 30 November 1974, Boulder Beach, Lake Mead; one 18 February 1975, Davis Dam; and one 4 December 1975, Cottonwood Basin, Lake Mohave, seen with Bill Prange. Vince Mowbray has a record of an immature 14 November 1976 at Lake Mead.

THAYER'S GULL, *L. thayeri.* Bill Prange and I discovered an immature near Nine Mile Cove, Lake Mohave, 4 December 1975. I took several photographs of the bird. Two immatures wintered at Lake Mead 30 November 1974-18 February 1975. During this same period two other immatures wintered at Davis Dam 98 km south of Lake Mead.

Adult birds have been observed in Nevada on three occasions: Sally Lawson and I observed one near Mormon Farm 20 April 1975; I found another at Las Vegas Bay, Lake Mead 10 March 1975; and Roy Horsley and I observed two 26 April 1976 at the Overton Wildlife Management Area. In addition, one immature was observed 26 April at Overton. This bird was very pale and washed out due to bleaching and/or feather wear but the checkered appearance and terminal band on the tail were still evident.

Fall 1976 records, all of immatures, are: one 10 November, Las Vegas Bay, Lake Mead, Vince Mowbray; one 14 November, Boulder Beach, Lake Mead, Vince Mowbray; two 14 November, Las Vegas Bay, Lake Mead, Vince Mowbray; two 22 November, Boulder Beach, Lake Mead, Vince Mowbray; one 24 November,

Figure 9. Second year Glaucous-winged Gull *(Larus glaucescens)*, Davis Dam, Clark Co., Nevada, and Mohave Co., Arizona, 9 January 1976.

Boulder Beach, Lake Mead, CSL and Vince Mowbray. The bird seen on 24 November was photographed. These records supplement previous records by Lawson (1973b).

FRANKLIN'S GULL, *L. pipixcan.* In June 1975 I discovered, in the NSM collection, specimens of two adults which were labeled Bonaparte's Gulls. Both specimens were collected at Carson Lake Marsh, Churchill County 4 June 1969 by Fred Funk. NSM 157 was a male, weight 261.45 g. NMS 158 was a female, weight 253.35 g.

Linsdale (1951) lists a prehistoric record from Lovelock Cave, Pershing County. I photographed an adult at Mormon Farm 13 km southeast of Las Vegas 13 July 1970, several of 13 adults present at Las Vegas Bay, Lake Mead 8 April 1972, and two of three adults present at Logandale 17 April 1975. In addition to these Clark County records, I photographed an adult at Comins Lake 16 km south of Ely, White Pine County, 4 June 1970.

There are also four fall records, all of immature birds. In 1973 I found one 23 September, Tule Springs Park, Las Vegas and one 8 October, Pahranagat National Wildlife Refuge, Lincoln County. John O'Connell found one at Las Vegas Bay, Lake Mead, 15 November 1974. Two were found by J. V. Remsen, Jr. 6 October 1976 at Bowman Reservoir in Logandale.

These are the first Nevada records.

BONAPARTE'S GULL, *L. philadelphia.* Austin and Bradley (1971) report only one fall and one winter record of Bonaparte's Gull for Clark County. I have knowledge of 15 fall records of 52 individuals, all in October and November. There are five additional winter records, four for the month of December and one for the month of January. There is also one fall record of two individuals 30 October 1975 from Washoe Valley, Washoe County, and Thomas Imhof (pers. comm.) reports one fall record from Yucca Lake, Nye County, Nevada Test Site 26 October 1951. This number of records indicates the species is uncommon but regular during fall migration and is occasionally present during winter.

While working with the NSM bird study skin collection in June 1975, I discovered a Bonaparte's Gull specimen which was simply labeled "Tern." The bird, NSM 552, is in first nuptial plumage. The specimen was collected by Peter Herlan in Pahranagat Valley, Lincoln County, 8 May 1964. There are no other data on the tag.

This supplements records of specimens listed by Alcorn (1946) and Hayward et al. (1963).

HEERMANN'S GULL, *L. heermanni.* Wotton and Marshall (1965) reported this species at Pyramid Lake, Washoe County. On 12 October 1975 Bill Prange observed an immature at Cottonwood Cove, Lake Mohave, and on 17 September 1976 I discovered an immature at Davis Dam on the Colorado River. Detailed descriptions of both birds agree on the following points:

> Size of a Ring-billed Gull. Uniform blackish-brown with some grayish edging on the back and wing coverts. Chin and throat grayish-brown. Bill brownish, tipped with grayish-white. Legs and feet black. Eye dark brown.

These are the second and third Nevada records, and the first for Clark County.

BLACK-LEGGED KITTIWAKE, *Rissa tridactyla.* John and Kay O'Connell discovered a sub-adult immediately below Davis Dam on the Colorado River 17 February 1975. It was studied at length and a very detailed description was taken. On 18 February I obtained an extensive series of photographs (Figure 10). The bi-colored bill, straw colored basally with a black tip, is characteristic of birds molting into first nuptial plumage.

On 4 December 1975 Bill Prange and I found another immature about 8 km north of Cottonwood Cove, Lake Mohave, on the Arizona side of the lake. The

bird was observed flying to the Nevada side of Lake Mohave. Two more immatures were found at Davis Dam 10 December, CSL; presumably the same two were observed the following day by Gale Monson, Rich Glinski and me.

Bob Barnhurst and I observed an adult and an immature at Davis Dam on 25 February 1976. Several photographs were taken of the adult. Vince Mowbray found an adult 10 November 1976 at Boulder Beach, Lake Mead.

These are the first Nevada records.

SABINE'S GULL, *Xema sabini.* There is only one published record of Sabine's Gull for Nevada (Clark et al. 1974). Terry Peters, Vince Mowbray and I found an immature in Las Vegas Bay, Lake Mead, 13 September 1975. Efforts to photograph the bird were unsuccessful.

While with Bill Prange 15 September 1976, I photographed an immature in Cottonwood Basin, Lake Mohave. I found another immature at Davis Dam 17 September. J. V. Remsen, Jr. photographed an immature 6 October at Bowman Reservoir, Logandale (Figure 11).

Figure 10. Sub-adult Black-legged Kittiwake *(Rissa tridactyla)*, Davis Dam, Clark Co., Nevada, 18 February 1975.

Figure 11. Immature Sabine's Gull *(Xema sabini)*, Logandale, Clark Co., Nevada, 6 October 1976.

Photo by J. V. Remsen, Jr.

While examining material in the UNMB collection, I discovered a gull specimen labeled *L. philadelphia*. The gull, which appeared to be misidentified, was taken by Tom Trelease at Soda Lake, Churchill County 26 September 1940. The specimen (UNMB 15, immature female, weight 117 g) was subsequently examined and compared with material at MVZ by Ned Johnson and determined to be a Sabine's Gull.

All Nevada records of this species have been in the four week period between the first week of September and the first week of October. These are the first records for Clark County and the first Nevada specimen.

COMMON TERN, *Sterna hirundo*. Though there have been numerous sightings of this tern in Nevada, there has been only one documented record (Lawson 1973b). I photographed six at Las Vegas Bay, Lake Mead, 13 September 1975.

This species was particularly abundant during the fall migration in 1976. I photographed 9 individuals at Las Vegas Bay, Lake Mead, 17 September. Four of these are shown in Figure 12. Other 1976 records are: two 7 August and five 7 September, Las Vegas Wash, Vince Mowbray; two 15 September, Lake Mohave, CSL and Prange; two 3 October, Lake Mead, CSL and Baepler. Prange had the following records at Lake Mohave: eight 18 September, fourteen 26 September and three 10 October. On 15 September, David Winkler found one at Washoe Lake, Washoe County and one at Lahontan Lake, Churchill County.

ANCIENT MURRELET, *Synthliboramphus antiquus*. One was photographed at Las Vegas Bay Marina, Lake Mead, 24 March 1974 by Frank Long of Boulder City. The bird was present until 26 March and was studied by most southern Nevada birders. One was collected at Pyramid Lake, Washoe County 4 March 1961 by V. K. Johnson (MVZ 142632, male, testis 7x1.5 mm, weight 140 g).

There are only two previous Nevada records. Both are specimen records (Gullion 1956, Smith 1966). These are the third and fourth Nevada records and the first for Clark County.

GROUND DOVE, *Columbina passerina*. On 25 February 1972 I collected one of three present at Mormon Farm southeast of Las Vegas (UNMB 1769, female, weight 34 g). While working in the NSM collection, I discovered a specimen of Ground Dove from Carson City, Ormsby County (now Independent City, Carson City). The bird (NSM 177, female) was collected by Bruce Arkell. No other data were on the tag. These are the fourth and fifth specimen records for Nevada. The Carson City record is the northernmost for the state.

Figure 12. Four of nine Common Terns *(Sterna hirundo)* present at Las Vegas Bay, Lake Mead, Clark Co., Nevada, 17 September 1976.

One individual was present 18 February-5 March 1973 at Tule Springs Park near Las Vegas. There are several 1976 records: two at Pahranagat National Wildlife Refuge, Lincoln County, 4 August, Richard Voss; one 26 September, two 3 October and one 10 October at Cottonwood Cove, Lake Mohave, all by Bill Prange.

INCA DOVE, *Scardafella inca.* I photographed one 31 October 1971 at Boulder City (Figure 13). Pauline Long and I discovered the bird 23 October. This is the first documented Nevada record.

Two or three individuals were present in Boulder City 17 December 1972-31 March 1973 (Pauline Long pers. comm.). Vince Mowbray and I observed one intermittently from 18 February to 5 March 1973 at Tule Springs Park near Las Vegas and on 15 May 1975 I photographed another individual at this location. One was observed by Bill Prange at Cottonwood Cove, Lake Mohave, 10-17 October 1976.

SNOWY OWL, *Nyctea scandiaca.* One almost flew into the windshield of my car 27 January 1972 as I was driving during a snowstorm in the Mira Loma area 16 km south of Reno, Washoe County. The bird landed on a fence post in a nearby field. Very heavy spotting indicated an immature bird. Two weeks later McCaskie (pers. comm.) found feathers of a Snowy Owl on a fence post in the same area. The only Nevada specimen is from Indian Springs in southern Nevada (Linsdale 1936).

ELF OWL, *Micrathene whitneyi.* Sally Lawson, Helen Lawson and I found three 5 June 1975 in the Ft. Mohave area at the southern tip of Nevada. Sally Lawson and I returned 12 June and collected one of five or six birds present that night (UNMB 1792, adult male, skull fully ossified, left testes 9x6 mm, moderate fat, no molt, weight 53.15 g). The stomach contained 12 caterpillars and one arachnid, all unidentified.

Figure 13. Inca Dove *(Scardafella inca)*, Boulder City, Clark Co., Nevada, 31 October 1971.

Van Remsen (pers. comm.) found one pair at the same site 21 April 1976. These are the first Nevada records. The type specimen for this species was taken just across the Colorado River in Ft. Mohave, Mohave County, Arizona in 1861. On the basis of this record the species appeared on the hypothetical list of Nevada birds (Linsdale 1936).

ACORN WOODPECKER, *Melanerpes formicivorus.* I photographed one 31 October 1971 in Boulder City. Pauline Long discovered the bird 23 October.

On 27 October 1972 I photographed and collected an individual at a residence at the base of Sunrise Mountain just east of Las Vegas (UNMB 1750, adult female, no fat, weight not taken). The bird was in fresh fall plumage except that the fifth secondary of the left wing was an old feather. The specimen was compared with material at MVZ by Ned Johnson and determined to be *M. f. formicivorus.* The 1930 specimen from Hidden Forest in the Sheep Range was *M. f. bairdi* (Van Rossem 1936).

These are the third and fourth Nevada records. All records have occurred between mid-September and the end of October. The headless specimen listed by Phillips et al. (1964) as being in the Lake Mead National Recreational Area collection can no longer be found.

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Figure 1. Los Coronados: left foreground, Middle Island; right center, Middle Rock; background, North Island. Photo taken from the northern end of South Island.

AN ANNOTATED LIST OF BIRDS OF ISLAS LOS CORONADOS, BAJA CALIFORNIA, AND ADJACENT WATERS

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Los Coronados consist of four rugged islands that lie 15 miles south of Point Loma, San Diego, and 8 miles west of the Mexican mainland opposite Tijuana. South Island, the largest, is 2 miles long and 0.4 miles wide, with a maximum elevation of 672 feet. North Island, approximately 2 miles distant, is 1 mile long, 0.12 miles wide, and 467 feet high. Middle Island and Middle Rock are much smaller and lie close to the northern tip of South Island. All of the islands have steep slopes (often precipitous on the western, or windward, sides) and are sparsely vegetated (Figure 1). There are no permanent sources of fresh water. General descriptions of the islands, and their vegetation may be found in Osburn (1909) and Nelson (1921). The history of the islands has been reviewed by Ellsberg (1970).

These islands have long been recognized as a major breeding area for seabirds (Figure 2) and other marine life, and since 1924 they have been designated a sanctuary by the government of Mexico. Because of their attractiveness and proximity to San Diego, they were studied intensively by naturalists near the turn of the century (Howell 1917), and to a lesser degree until the present time (see references in Grinnell 1928). However, little of the information that has accumulated in recent decades has found its way into the literature.

Figure 2. A portion of the Brown Pelican colony on North Island, May 1970.

This paper, which summarizes the status of all species recorded from the islands through June 1977, is based, in part, on over 45 trips to the islands and adjacent waters since 1967. These trips have been made at all seasons, though mostly January-July, in conjunction with studies of pelican biology. Accordingly, the status of fall migrants is not well known. In general, however, most common passerine migrants that do not winter in southern California are much commoner along the adjacent coast (and thus presumably on the islands) in spring than in fall.

A detailed analysis of changes in the history of the breeding bird fauna will be published separately (Jehl in prep.).

The first annotated list of the birds of Los Coronados, by J. Grinnell and F. S. Daggett (1903), was based on a trip to the islands in early August 1902; 21 species were noted. The present list includes 162 species (a few lack convincing data). The total may appear quite high in view of the small size of the islands and the small number of species (31) known or thought to have bred at least once. But islands are notorious traps for migrants, particularly night-migrating landbirds that lose their way over the ocean and at dawn seek out the first available resting place, be it a desert island or a bouncing boat. Landbird migrants comprise over half of the species recorded to date. On almost any day during the spring or fall migration periods a few strays will be present. And sometimes on foggy spring mornings the sparse vegetation teems with warblers, vireos, tanagers, thrushes, and flycatchers seeking water, insects, and shelter. Some of these—weak and exhausted—perish on the islands, but most seem to survive until they can regain the mainland or continue on their journey.

Lists of island bird faunas may seem mere exercises in record keeping, especially because many studies have shown that virtually every species that migrates over the adjacent mainland can be expected to appear sooner or later. Since the mainland of San Diego County boasts a list of over 430 species, it is obvious that many potential visitors remain to be detected. Yet, the lists have other values. They provide clues to the ecological preference of certain waterbirds that might not be obvious. For example, Western Grebes, Ring-billed Gulls, Forster's Terns, Elegant Terns, and Least Terns, which are common along the mainland coast at some seasons, might be expected to occur near the islands. But there they are rare or absent. Evidently, these species require shallow near-shore waters and rarely stray far to sea. The lists provide a historical baseline for detecting and analyzing changes on the islands (e.g., Diamond 1969, Lynch and Johnson 1974, Jones and Diamond 1976). They also give biologists insight into the dispersal and colonizing ability of species (e.g., Power 1972). For example, House Finches and Rock Wrens nest on Los Coronados and other coastal islands and evidently disperse easily, whereas some of the commonest

birds of mainland coastal sage scrub and chaparral communities—Wrentit, Brown Towhee, California Thrasher, Scrub Jay, Bushtit—have never been recorded. These sedentary species seem reluctant to cross even small barriers, much less an eight-mile expanse of open water. One well-known colonizer, the Starling, was not found on the islands until 1976. Its associate the unloved and almost ubiquitous House Sparrow, has not yet appeared. Its continued absence is a matter of some joy.

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ANNOTATED LIST OF SPECIES

The following list includes all species reported from Los Coronados and adjacent waters (ca. 5-10 miles) through June 1977. Species known or thought to have bred at least once are indicated by an asterisk. Abbreviated citations are given to the relevant literature. SDNHM=San Diego Natural History Museum.

COMMON LOON, *Gavia immer.* Uncommon; regular in migration, winter.

YELLOW-BILLED LOON, *Gavia adamsii.* Accidental. One record, 23 Nov. 1968 (Jehl, Condor 72:376, 1970).

ARCTIC LOON, *Gavia arctica.* Common migrant, uncommon in winter.

RED-THROATED LOON, *Gavia stellata.* Uncommon migrant.

EARED GREBE, *Podiceps nigricollis.* Fairly common migrant, winter resident; often seen in kelp beds.

SHORT-TAILED ALBATROSS, *Diomedea albatrus.* Formerly fairly regular (Anthony, Proc. Calif. Acad. Sci., Ser. 4, 14:277-330, 1925), now nearly extinct; no recent records.

BLACK-FOOTED ALBATROSS, *Diomedea nigripes.* Oceanic, very rare near land; one seen 5 mi. from islands on 4 May 1968.

NORTHERN FULMAR, *Fulmarus glacialis.* Winter visitor. Yearly abundance varies sharply; sometimes common, usually uncommon to rare.

PINK-FOOTED SHEARWATER, *Puffinus creatopus.* Migrant from southern hemisphere. Fairly common April through early October.

[WEDGE-TAILED SHEARWATER, *Puffinus pacificus.* Reports of this tropical species near the islands on 16 Dec. 1956 (Murphy, U.S. Dept. Interior Spec. Sci. Rept. Fisheries, No. 279, 1958) seem attributable to *P. griseus* and *P. puffinus.*]

SOOTY SHEARWATER, *Puffinus griseus.* Migrant from southern hemisphere; common to abundant from April to October; rare in winter.

SHORT-TAILED SHEARWATER, *Puffinus tenuirostris.* Migrant from southern hemisphere; very rare. Specimen, 19 Sep. 1937 (SDNHM); sight record 24 Nov. 1968 (Jehl).

MANX SHEARWATER, *Puffinus puffinus opisthomelas.* Migrant. Common from late autumn to early spring; rare in summer. Has been suspected of breeding (Howell, Condor 12:184-187, 1910) but there is no evidence. Nearest colonies are on islands off central Baja California.

*LEACH'S STORM-PETREL, *Oceanodroma leucorhoa.* Fairly common summer resident; present April to October.

*ASHY STORM-PETREL, *Oceanodroma homochroa.* Very rare summer resident; present status not known. A few sightings in early winter.

*BLACK STORM-PETREL, *Oceanodroma melania.* Common summer resident; present April to October.

LEAST STORM-PETREL, *Halocyptena microsoma.* Breeds on islands off central Baja California and in Gulf of California and migrates northward in late summer. Presumably rare but regular in August-September. Has been collected off San Diego.

*BROWN PELICAN, *Pelecanus occidentalis.* Common resident, though the size of breeding population may vary sharply from year to year. Reproductive success formerly affected by pesticides, now improving (Jehl 1973; Anderson et al. 1975).

BLUE-FOOTED BOOBY, *Sula nebouxii.* Rare vagrant from Gulf of California. In the "flight year" of 1971, 18 were at Middle Rock on 20 August (Jehl), and 38 were there on 21 November (McCaskie).

BROWN BOOBY, *Sula leucogaster.* Accidental. Specimen, 12 mi. south of islands, 12 Aug. 1935 (Huey, Condor 37, 287-288, 1935).

*DOUBLE-CRESTED CORMORANT, *Phalacrocorax auritus.* Resident. Formerly nested in great abundance; now reduced to a few pairs.

*BRANDT'S CORMORANT, *Phalacrocorax penicillatus.* Common to abundant in winter. Formerly hundreds of pairs nested; now breeds in very small numbers.

*PELAGIC CORMORANT, *Phalacrocorax pelagicus.* Uncommon to rare winter resident; occasional in summer; formerly nested in very small numbers (ca. 12 pairs).

*GREAT BLUE HERON, *Ardea herodias.* Regular visitor from mainland; has nested.

GREEN HERON, *Butorides striatus.* Rare migrant; specimen taken in 1885 (Howell, Pac. Coast Avif. 12, 1917).

CATTLE EGRET, *Bubulcus ibis.* Sight record, North Island, April 1970 (McCaskie).

REDDISH EGRET, *Dichromanassa rufescens.* Sight record, North Island, 6 May 1968 (Von Bloeker and Harter, Condor 30:253, 1928).

SNOWY EGRET, *Egretta thula.* Sight record, South Island, 27 January 1976 (C. L. Hubbs).

BRANT, *Branta bernicla nigricans.* Uncommon migrant; occasional in winter in kelp beds.

PINTAIL, *Anas acuta.* Migrant; sometimes common near islands in fall.

SURF SCOTER, *Melanitta perspicillata.* Abundant migrant; fairly common winter resident.

RED-BREASTED MERGANSER. *Mergus serrator.* Common migrant; fairly common winter resident.

RED-TAILED HAWK, *Buteo jamaicensis.* Occasionally wanders to islands in fall migration. One spring record (7 May 1976).

*BALD EAGLE, *Haliaeetus leucocephalus.* 1-2 pairs reported nesting near the turn of the century. Extirpated.

MARSH HAWK, *Circus cyaneus.* Occasionally wanders to islands in migration; specimen 6 April 1909 (van Rossem, Condor 11:208, 1909).

?*OSPREY, *Pandion haliaetus.* Rare migrant; may have bred formerly (L. W. Walker pers. comm.).

*AMERICAN KESTREL, *Falco sparverius.* Resident on North and South islands.

*PEREGRINE FALCON, *Falco peregrinus.* Former resident; now extirpated and occurs only rarely in migration.

*CALIFORNIA QUAIL, *Lophortyx californicus.* Introduced. Common resident on South Island.

?*AMERICAN OYSTERCATCHER, *Haematopus palliatus.* Occasionally wanders northward to islands from breeding grounds in central Baja California. Breeding status uncertain; probably hybridizes with Black Oystercatcher.

*BLACK OYSTERCATCHER, *Haematopus bachmani.* Fairly common resident.

BLACK-BELLIED PLOVER, *Pluvialis squatarola.* Uncommon migrant.

WHIMBREL, *Numenius phaeopus.* Rare in migration.

LONG-BILLED CURLEW, *Numenius americanus.* Rare migrant; two reported at North Island, 1 May 1968 (DeLong and Crossin, fide J. Diamond).

GREATER YELLOWLEGS, *Tringa melanoleuca.* Rare migrant; one record, specimen, 11 April 1908 (Osburn, Condor 11:134-138, 1909).

[LESSER YELLOWLEGS, *Tringa flavipes.* One unconvincing report (see Howell, Pac. Coast Avif. 12, 1917).]

SPOTTED SANDPIPER, *Actitis macularia.* Uncommon migrant; occasional in winter.

WANDERING TATTLER, *Heteroscelus incanus.* Migrant; a few present through entire year; commonest in fall, winter.

RUDDY TURNSTONE, *Arenaria interpres.* Occasional in migration; sight record 11 May 1968 (Jehl).

BLACK TURNSTONE, *Arenaria melanocephala.* Regular and fairly common in migration, winter; a few summer records.

NORTHERN PHALAROPE, *Phalaropus lobatus.* Migrant, occasionally common in spring and fall.

RED PHALAROPE, *Phalaropus fulicarius.* Migrant; flocks of several hundred may occur in kelp beds, spring and fall.

SURFBIRD, *Aphriza virgata.* Uncommon to rare fall migrant; very few spring records.

SANDERLING, *Calidris alba.* Rare migrant.

WESTERN SANDPIPER, *Calidris mauri.* Migrant, uncommon but regular.

LEAST SANDPIPER, *Calidris minutilla.* Rare but regular in migration.

POMARINE JAEGER, *Stercorarius pomarinus.* Common migrant, spring and fall; rare in summer, winter.

PARASITIC JAEGER, *Stercorarius parasiticus.* Regular migrant; much less common than Pomarine Jaeger.

GLAUCOUS-WINGED GULL, *Larus glaucescens.* Uncommon winter visitor.

*WESTERN GULL, *Larus occidentalis.* Abundant resident, with major nesting colonies on North and South islands.

HERRING GULL, *Larus argentatus.* Winter visitor; fairly common October through April.

THAYER'S GULL, *Larus thayeri.* Uncommon winter visitor.

CALIFORNIA GULL, *Larus californicus.* Winter visitor, common October to April.

RING-BILLED GULL, *Larus delawarensis.* Rare winter visitor; this species is very uncommon away from the shore.

FRANKLIN'S GULL, *Larus pipixcan.* One record, an adult between the islands and San Diego, 21 May 1967 (Jehl).

BONAPARTE'S GULL, *Larus philadelphia.* Winter visitor October through May; often abundant in migration.

HEERMANN'S GULL, *Larus heermanni.* Migrant from Gulf of California. Present year-round; abundant in late summer.

BLACK-LEGGED KITTIWAKE, *Rissa tridactyla.* Winter visitor in varying numbers, sometimes abundant; a few summer records.

SABINE'S GULL, *Xema sabini.* Uncommon but regular migrant in May, August-September.

FORSTER'S TERN, *Sterna forsteri.* Probably uncommon summer visitor; no definite records. Reported by Grinnell and Daggett (Auk 20:27-37, 1903) "some distance from South Island."

COMMON TERN, *Sterna hirundo.* Migrant; fairly common spring and fall.

ARCTIC TERN, *Sterna paradisaea.* Rare migrant. Sight record 10 mi. S of South Island, 12 July 1975 (Jehl).

ROYAL TERN, *Sterna maxima.* Visitor, common to abundant in summer and early autumn; occasional records through year.

ELEGANT TERN, *Sterna elegans.* Presumed visitor in late summer, but apparently no definite records.

CASPIAN TERN, *Sterna caspia.* Uncommon visitor to islands spring-fall; nests on mainland in San Diego.

COMMON MURRE, *Uria aalge.* Rare but apparently regular winter visitor in recent years. Two or three on 22 Nov. 1969 (photos, SDNHM) constituted first record for Mexico.

PIGEON GUILLEMOT, *Cepphus columba.* Rare vagrant. The only Mexican records are: one, 6 June 1961 (photo); two, 23 July 1974 (Todd, Anderson, Jehl, photos, SDNHM). The nearest nesting areas are on the Channel Islands of California.

*XANTUS MURRELET, *Endomychura hypoleuca.* Fairly common summer resident; rare in autumn, uncommon in winter.

CRAVERI'S MURRELET, *Endomychura craveri.* Late summer (August-September) visitor to local waters; probably rare but regular. Six collected near islands on 13 Aug. 1914 by van Rossem. Sight records: one, 4 mi. S of islands, 20 Feb. 1972 (Jehl); one, between San Diego and islands, 6 June 1969 (Jehl).

*CASSIN'S AUKLET, *Ptychoramphus aleuticus.* Regular in vicinity of islands through year, commonest in autumn, winter; formerly nested on North Island.

RHINOCEROS AUKLET, *Cerorhinca monocerata.* Uncommon winter visitor, several summer records.

ROCK DOVE, *Columba livia.* Remains of one killed by a falcon, found on Middle Rock, 17 June 1969, are the only evidence of the species' occurrence. Possibly introduced on South Island.

WHITE-WINGED DOVE, *Zenaida asiatica.* Vagrant; one, South Island, 7 Aug. 1973 (Jehl).

*MOURNING DOVE, *Zenaida macroura.* A few present on South Island and sometimes North Island, in spring and summer. Presumed to nest in small numbers.

*BARN OWL, *Tyto alba.* Several records; nested once (Howell, Pac. Coast Avif. 12, 1917).

BURROWING OWL, *Athene cunicularia.* Sight record, North Island, 7 April 1909 (van Rossem, Condor 11:208, 1909).

LONG-EARED OWL, *Asio otus.* Sight record, North Island, 7 April 1909 (van Rossem, Condor 11:208, 1909).

SHORT-EARED OWL, *Asio flammeus.* Two sight records; North Island, 8 April 1908 (Osburn, Condor 11:134-138, 1909); one flying over Middle Island, 22 Nov. 1969 (Jehl).

POOR-WILL, *Phalaenoptilus nuttallii.* Sight record, South Island, 7 May 1976 (R. Pitman).

LESSER NIGHTHAWK, *Chordeiles acutipennis.* Sight record, North Island, 6 Aug. 1973 (Jehl).

VAUX'S SWIFT, *Chaetura vauxi.* Probably uncommon migrant. One sight record, South Island, 7 May 1976 (R. Pitman).

WHITE-THROATED SWIFT, *Aeronautes saxatalis.* Fairly common summer resident; probably rare or absent in winter.

BLACK-CHINNED HUMMINGBIRD, *Archilochus alexandri.* Vagrant. Sight record, adult male, North Island, 1 May 1968 (DeLong and Crossin, fide J. Diamond).

*COSTA'S HUMMINGBIRD, *Calypte costae.* Rare summer resident; South Island; occasionally seen on North Island.

ANNA'S HUMMINGBIRD, *Calypte anna.* Status uncertain, probably a rare vagrant. Osburn (Condor 11:134-138, 1909) reported it without comment on North Island In April 1908. Howell (Pac. Coast Avif. 12, 1917) reported a male on 17 May 1910. There are several other sight records of dubious validity.

ALLEN'S HUMMINGBIRD, *Selasphorus sasin.* Apparently a rare vagrant during migration, but there are no specimens to substantiate its occurrence. One *Selasphorus* (sp.) was seen on South Island on 7 May 1976 (R. Pitman).

BELTED KINGFISHER, *Megaceryle alcyon.* Fairly common in migration, occasionally winter.

COMMON ("RED-SHAFTED") FLICKER, *Colaptes auratus.* Migrant. A few spring, fall records.

WESTERN KINGBIRD, *Tyrannus verticalis.* Migrant; uncommon but regular in spring.

CASSIN'S KINGBIRD, *Tyrannus vociferans.* Probably uncommon but regular in migration; a few spring records.

ASH-THROATED FLYCATCHER, *Myiarchus cinerascens.* Migrant. Fairly common in spring, several fall records.

BLACK PHOEBE, *Sayornis nigricans.* Occasional in migration.

SAY'S PHOEBE, *Sayornis saya.* Uncommon migrant in spring and, presumably, in fall. Published record for March 1921 (Stephens, Condor, 23:96-97, 1921).

WILLOW FLYCATCHER, *Empidonax traillii.* Migrant, several spring sightings; specimen (Osburn, Condor 11:134-138, 1909).

HAMMOND'S FLYCATCHER, *Empidonax hammondii.* Migrant; fairly common in spring.

WESTERN FLYCATCHER, *Empidonax difficilis.* Migrant, common to abundant in spring; a few fall records. Several summer records on South Island hint at possible nesting.

WESTERN WOOD PEWEE, *Contopus sordidulus.* Migrant, common in spring and, presumably, fall.

OLIVE-SIDED FLYCATCHER, *Nuttallornis borealis.* Rare spring migrant. Two records for South Island: 1 June 1973 (Jehl); 7 May 1976 (Pitman).

HORNED LARK, *Eremophila alpestris.* Several fall sightings; probably rare but regular in migration.

TREE SWALLOW, *Iridoprocne bicolor.* Probably regular in migration; two seen 17 March 1974 (McCaskie).

*BARN SWALLOW, *Hirundo rustica.* Common migrant. A few pairs reside on South Island in summer.

*COMMON RAVEN, *Corvus corax.* Wanders irregularly to islands; formerly nested.

?*HOUSE WREN, *Troglodytes aedon.* Uncommon migrant; a pair or two probably breed on South Island.

BEWICK'S WREN, *Thryomanes bewickii.* Uncommon migrant; a few spring records.

[CACTUS WREN, *Campylorhynchus brunneicapillus.* One reported on South Island, 14 March 1970, by inexperienced observers.]

LONG-BILLED MARSH WREN, *Cistothorus palustris.* Migrant; several spring records.

CAÑON WREN, *Catherpes mexicanus.* Vagrant. Specimen collected 29 March 1909 (van Rossem, Condor 11:208, 1909).

*ROCK WREN, *Salpinctes obsoletus.* Resident in small numbers.

MOCKINGBIRD, *Mimus polyglottos.* Vagrant. Three records: North Island 1 June 1968 (T. Howell); South Island, 18 May 1969 (J. Diamond); and one (two?), seemingly on territory, South Island, 23 July 1974 (Jehl).

AMERICAN ROBIN, *Turdus migratorius.* In May 1924, L. M. Huey (field notes) found the remains of one killed by a Peregrine Falcon "during the winter."

HERMIT THRUSH, *Catharus guttatus.* Fairly common migrant.

SWAINSON'S THRUSH, *Catharus ustulatus.* Fairly common migrant.

BLUE-GRAY GNATCATCHER, *Polioptila caerulea.* Migrant; several spring records.

WATER PIPIT, *Anthus spinoletta.* Probably regular in migration; one sighting.

LOGGERHEAD SHRIKE, *Lanius ludovicianus.* Vagrant. One, South Island, 8 May 1974 (S. Bond and J. Butler).

STARLING, *Sturnus vulgaris.* Vagrant. First noted on the Island in 1976; 5, South Island, 7 May; 1, North Island, 7-8 May.

WARBLING VIREO, *Vireo gilvus.* Regular migrant; often common in spring.

PROTHONOTARY WARBLER, *Protonotaria citrea.* Accidental. One record, a male flying around a fishing boat near the islands, 21 May 1967 (Jehl).

*ORANGE-CROWNED WARBLER, *Vermivora celata.* Common migrant. Formerly nested on South Island, but no recent evidence of breeding.

NASHVILLE WARBLER, *Vermivora ruficapilla.* Migrant; several spring sightings.

YELLOW WARBLER, *Dendroica petechia.* Common migrant.

BLACK-THROATED BLUE WARBLER, *Dendroica caerulescens.* Rare migrant. One record, female, North Island, 21 May 1967 (Jehl).

YELLOW-RUMPED (AUDUBON'S) WARBLER, *Dendroica coronata.* Regular, often common in migration; probably a few winter.

BLACK-THROATED GRAY WARBLER, *Dendroica nigrescens.* Uncommon migrant.

TOWNSEND'S WARBLER, *Dendroica townsendi.* Common migrant.

HERMIT WARBLER, *Dendroica occidentalis.* Uncommon migrant.

MacGILLIVRAY'S WARBLER, *Oporornis tolmiei.* Uncommon migrant.

COMMON YELLOWTHROAT, *Geothylpis trichas.* Uncommon migrant.

WILSON'S WARBLER, *Wilsonia pusilla.* Common migrant; often abundant in spring.

?*WESTERN MEADOWLARK, *Sturnella neglecta.* Migrant; probably breeds on South Island.

YELLOW-HEADED BLACKBIRD, *Xanthocephalus xanthocephalus.* Rare migrant. Sight records for May (photo SDNHM), August.

[HOODED ORIOLE, *Icterus cucullatus.* According to J. Diamond (MS) two were reported on South Island on 25 April 1949. This is later than the usual migration period of this species but within the normal migration period of Bullock's Oriole. Identification seems questionable.]

NORTHERN (BULLOCK'S) ORIOLE, *Icterus galbula.* Migrant; common in spring.

BROWN-HEADED COWBIRD, *Molothrus ater.* Several spring records including: 2 males and 2 females, South Island, 23 July 1974; and 1 male and 2 females, North Island, 7-8 May 1976. A specimen collected on 5 Sep. 1914 (SDNHM) is referable to the northwestern race, *artemisiae.*

WESTERN TANAGER, *Piranga ludoviciana.* Migrant; sometimes abundant in spring.

ROSE-BREASTED GROSBEAK, *Pheucticus ludovicianus.* One record, adult male, North Island, 7 June 1977. Vagrant.

BLACK-HEADED GROSBEAK, *Pheucticus melanocephalus.* Migrant, common in spring.

LAZULI BUNTING, *Passerina amoena.* Uncommon migrant; several spring sightings.

*HOUSE FINCH, *Carpodacus mexicanus.* Resident, commonest on South Island.

GREEN-TAILED TOWHEE, *Pipilo chlorurus.* One record, North Island, 28 April 1977.

RUFOUS-SIDED TOWHEE, *Pipilo erythrophthalmus.* Uncommon migrant.

SAVANNAH SPARROW, *Passerculus sandwichensis.* Migrant; several fall records.

GRASSHOPPER SPARROW, *Ammodramus savannarum.* One record, North Island, 6 Aug. 1973 (Jehl).

VESPER SPARROW, *Pooecetes gramineus.* One record, South Island, 7 May 1976 (R. Pitman).

LARK SPARROW, *Chondestes grammacus.* Uncommon migrant.

DARK-EYED (OREGON) JUNCO, *Junco hyemalis.* Uncommon but regular in spring, fall migration; possibly a few winter.

*CHIPPING SPARROW, *Spizella passerina.* Common migrant; several pairs nest on South Island.

BREWER'S SPARROW, *Spizella breweri.* One record, South Island, 7 May 1976 (R. Pitman).

WHITE-CROWNED SPARROW, *Zonotrichia leucophrys.* Abundant migrant and common winter resident.

GOLDEN-CROWNED SPARROW, *Zonotrichia atricapilla.* Probably an uncommon to rare migrant and rare winter resident. One record, South Island, 7 May 1976.

LINCOLN'S SPARROW, *Melospiza lincolnii.* Uncommon migrant, spring and fall.

*SONG SPARROW, *Melospiza melodia.* Resident, breeds in small numbers.

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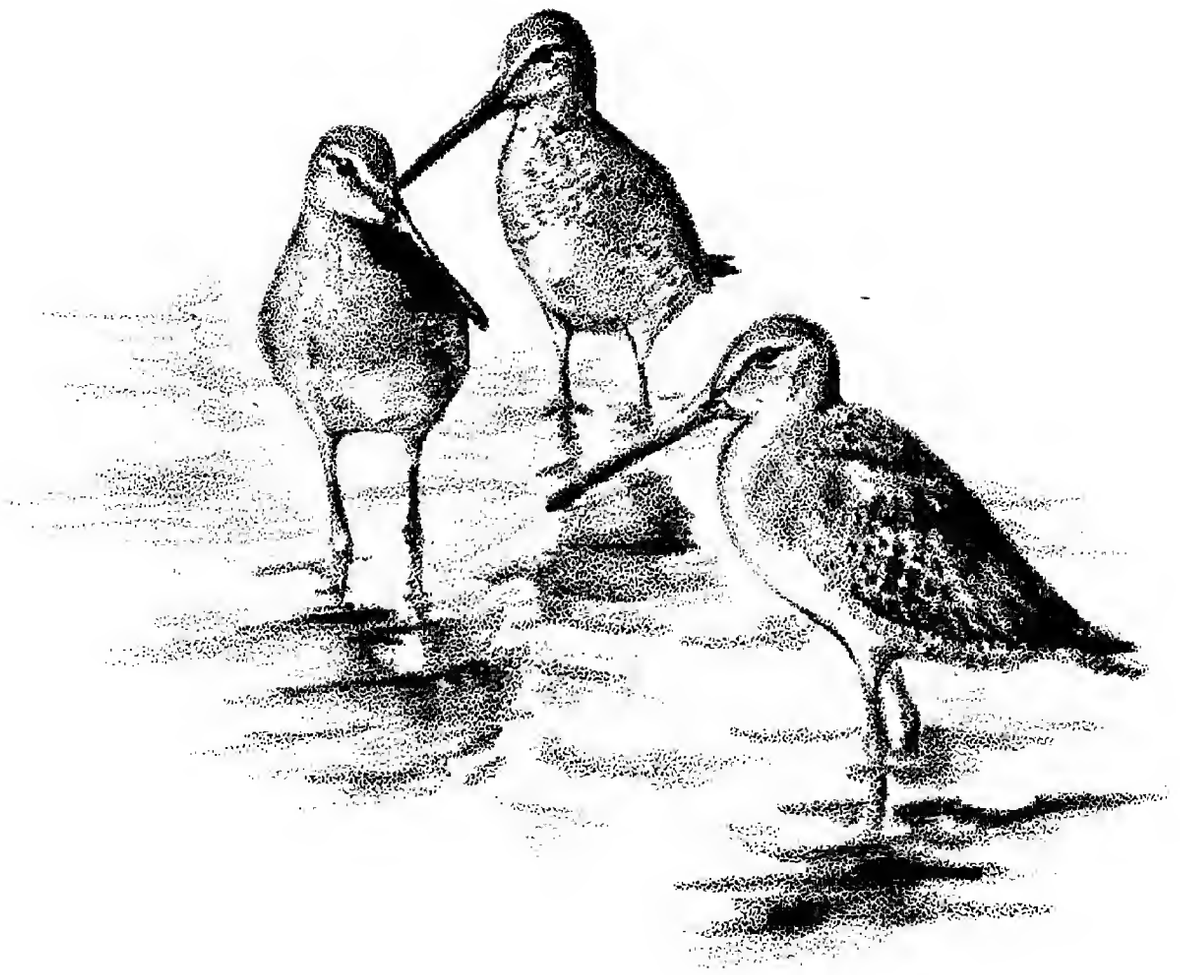

Sketch by Denise Robertson Devine

NOTES

ROBINS EXTENDING BREEDING RANGE INTO TUCSON

GRACE G. GREGG, 2350 E. Second Street, Tucson, Arizona 85719

American Robins *(Turdus migratorius)* have not been reported nesting in the hot desert areas of the southwest. On 18 June 1965 I found a pair nesting in a White Mulberry *(Morus alba)* near the University of Arizona in central Tucson, Pima County, Arizona (Snider 1965). The resident of the property told me a pair had successively bred there for 2 or 3 years. In 1966 a pair nested in the same tree and in the late spring of 1967 I saw a pair in the vicinity but a nest was not located. Phil Norton told me he saw a pair in the late spring of 1971 in the same area. Doug Danforth observed a single bird at San Xavier Mission near Tucson 18 June 1974 (Monson 1974) and Stephen Russell found an apparently summering robin in Himmel Park, a mile from the University, 11 September 1974 (Monson 1974). Throughout the spring of 1975 I observed a pair nesting in a California Fan Palm *(Washingtonia filifera)* in Himmel Park. The robins fledged one young on 12 May. Harold Fetter saw adults feeding young in a nest in Evergreen Cemetery, 1.5 miles northwest of the University, 20 May 1975 (Monson pers. comm.). Two pairs of robins built their nests in Aleppo Pines *(Pinus halepensis)* in Himmel Park in 1976 and were feeding young in the nest in mid April but it is doubtful if any survived. The same year in Evergreen Cemetery six robins were present throughout the spring; the area was not checked during July and August, but two were present in September. In the spring of 1977 two to six robins were frequently seen in Himmel Park and males were heard singing, but it was not until 3 May I found a pair building a nest high in a Red Gum Eucalyptus *(Eucalyptus camaldulensis)*. All of the nests have been in introduced trees that are more numerous in the city and probably offer a more suitable habitat than indigenous trees.

The American Robin winters in southern Arizona from mid October to early May in Sonoran zones. It is a common summer resident of openings in Transition and Boreal zones, and locally in moist Upper Sonoran riparian woodland (Phillips et al. 1964). Phillips reports some low altitude breeding sites near the edge of the desert in mountain canyons, such as Madera and Florida canyons in the Santa Rita Mountains and Cave Creek Canyon in the Chiricahua Mountains. There are no breeding records for robins in metropolitan Phoenix, Arizona, or El Paso, Texas, which share an arid climate with Tucson (Janet Witzeman pers. comm.).

More robins are present now than in colonial days because the robin adapts itself to man's structures (Bent 1949). They have been extending their range both north and south (Howell 1942). In earlier periods in California they bred in the mountains from 5000 to 12000 feet but since 1890 they have moved to the lowlands to breed as man altered the land by irrigation and provided suitable habitat (Howell 1942). At present in southern California the robin nests in the mountains and also in foothills, lowland suburbs and urban parks (Small 1974).

Tucson's older neighborhoods, parks and cemeteries are an oasis in the desert and the well established trees, bushes and lawns now offer adequate habitat for

breeding robins. The number of birds and nests found in the past 3 years indicates breeding may be increasing.

I am grateful to Stephen Russell for his support, encouragement and critical review of this paper and to Charles Mason who helped with the identification of the trees.

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Sketch by Tim Manolis

NORTHERN (BULLOCK'S) ORIOLE EATS HUMMINGBIRD

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On 1 August 1976 at 1245 on South Farallon Island, California, Steve Morrell and I observed an immature or adult female Northern (Bullock's) Oriole *(Icterus galbula)* eating a hummingbird *(Selasphorus* sp.). The oriole was perched on a dead branch near the top of an 8 m high Monterey Cypress *(Cupressus macrocarpa)*. It held the hummingbird with one foot and tore off and swallowed pieces of muscle, about 2 cm long, from the hummingbird's back. After watching the oriole feeding for several minutes we left the area, and when I returned 15 minutes later the oriole was gone; I found no remains of the hummingbird. It is not known whether the oriole was a predator or a scavenger since we did not see how it obtained the hummingbird.

Although several animals are known to prey upon and/or eat hummingbirds, orioles very rarely have been reported doing either. Wright (Auk 79:112, 1962) observed an adult male Northern (Baltimore) Oriole *(Icterus galbula)* capture and kill a Ruby-throated Hummingbird *(Archilochus colubris)*. The oriole dropped the hummingbird when the observer approached too closely, so it was not known if the oriole intended to eat it. The only other instance of a passerine preying upon a hummingbird was reported by Gamboa (Auk 94:157, 1977) who observed a Wied's Crested Flycatcher *(Myiarchus tyrannulus)* capture and kill a Rufous Hummingbird *(Selasphorus rufus)*. He did not see the flycatcher eat the hummingbird.

The oriole's use of the hummingbird as food on South Farallon Island may be the result of a limited food supply available for landbirds. The simple plant community on the island consists of 13 native and 23 introduced species (Coulter, Madroño 21:131-137, 1972), none of which are normally part of the Northern Oriole's diet. Bent (U. S. Natl. Mus. Bull. 211:274-276, 1958) states that the oriole's diet, which is obtained mostly by gleaning the foliage, consists of 21% vegetable matter, mainly fruit, and 79% animal matter, including Lepidoptera moths, pupae, and caterpillars. Orioles on the island most probably eat insects. Although little is known about the island's insects, several aerial species are present. During my nine day stay I frequently observed orioles hawking for insects. The oriole's use of aerial insects, and especially the hummingbird, as food is an example of opportunistic utilization of the available prey species.

I thank Bruce A. Sorrie, Gary Page and Laurence C. Binford for critically reading this note. This is Contribution 141 of the Point Reyes Bird Observatory.

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OLIVE WARBLERS IN THE SAN FRANCISCO MOUNTAINS, ARIZONA

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On 19 March 1972 we saw three Olive Warblers *(Peucedramus taeniatus)* on the southeastern slope of the San Francisco Mountains, Coconino County, Arizona. The three warblers included one male in breeding plumage and two individuals in female or juvenal plumage. We saw these birds foraging together in Ponderosa Pines *(Pinus ponderosa)* on a steep south facing slope at the upper edge of the Transition Zone (2640 m). The exact location was 35° 18′ 30″ N, 111° 36′ 40″ W.

Phillips et al. (1964) state the breeding range of the Olive Warbler in Arizona to be "north to the south edge of the Mogollon Plateau and west to the Santa Rita and Santa Catalina Mountains." Mearns (1890) found it a common summer resident on portions of the Mogollon range but absent from the San Francisco Mountains. Mearns did, however, report a doubtful sighting of an individual of this species on Kendrick Peak, 10 km northwest of the San Francisco Mountains. The San Francisco Mountains are 96 km north of Baker Butte, the northernmost verified record for the Olive Warbler (Phillips et al. 1964).

The Olive Warbler is a partial migrant, a few individuals remaining in portions of the breeding range in Arizona throughout the winter. The migrant portion of the population apparently returns to southeastern Arizona during March (Phillips et al. 1964). Although 19 March is early, this sighting of the Olive Warbler is consistent with observations of the species in southeastern Arizona. The weather prior to 19 March was warm and sunny and snow had disappeared from the slope before 19 February.

We observed the warblers at a distance of 5 to 30 m for at least 5 minutes. They foraged among the outer branches and needles searching for insects and occasionally sallied out 1 or 2 m in pursuit of small flying insects. The male and at least one other bird sang. The song consisted of 2 to 5 pairs of loud, low pitched slurred notes as described by Robbins et al. (1966). The song "peter-peter-peter-peter" described by Peterson (1961) was not heard. Behavior indicating whether two of these birds were a mated pair (courtship feeding, etc.) or intended to breed in this area (carrying nest material, etc.) was not observed. Vander Wall searched for the birds again on 20 and 25 March, but without success.

We thank Keith L. Dixon and Russell P. Balda for their helpful criticism of the manuscript.

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EASTERNMOST RECORD OF THE BAND-TAILED PIGEON IN IDAHO

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During June 1976 a Band-tailed Pigeon *(Columba fasciata)* was sighted at the University of Idaho's Taylor Ranch Field Station (46°6′ N, 114°51′ W). The research station is located in the Big Creek drainage of the Idaho Primitive Area. The Primitive Area is an expanse of 5200 km^2 of wilderness located contiguous to and south of the Salmon River Mountains. This sighting is noteworthy because Idaho is not listed in the winter or summer range of either the coastal race or interior race of the Band-tailed Pigeon (Braun et al. 1975).

The initial sighting was on 12 June 1976. At 1010 Jerran T. Flinders observed a Band-tailed Pigeon approximately 10 m up in a Douglas-fir *(Pseudotsuga menziesii)*. The sky was overcast, temperature 12°C. The bird remained stationary long enough for the following station personnel to positively identify it as a Band-tailed Pigeon: James Bennett, Charles Elliott, Arlow Lewis, Jerran T. Flinders and Steve Peck. The purplish-drab head, evident bar of white across the nape, metallic greenish-bronze on the hindneck and brownish-gray tail with its band of darker gray readily identified the adult bird as a Band-tailed Pigeon. The pigeon flew across Big Creek and was lost from sight at 1150. The bird was later observed by Elliott and Bennett on 13 June at 1950 in another Douglas-fir.

A Band-tailed Pigeon was again sighted at the Taylor Ranch Field Station on 29 May 1977.

Literature references reveal that the Band-tailed Pigeon was first reported by Merrill in 1897 in what is now northern Idaho (Burleigh 1972). Two specimens were taken in 1947 in southern Idaho. One, a female (Carnegie Museum 131818), was collected on 20 June on Reynolds Creek, Owyhee County; the other, a male (Carnegie Museum 132402), on 5 October at Bogus Basin in Boise County (Burleigh 1972). More recently two birds were reported at Pend Oreille Lake, Idaho, in late July 1970; the species was also reported at Campbell's Ferry on the Salmon River (Rogers 1970).

The sighting reported here occurred in Valley County and represents the easternmost reported sighting of the Band-tailed Pigeon in Idaho.

I would like to express my appreciation to Thomas H. Rogers who generously supplied the literature references and sighting records for the Band-tailed Pigeon in Idaho.

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OBJECTS INCORPORATED WITHIN CLUTCHES OF THE CANADA GOOSE

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While conducting studies of nesting Canada Geese *(Branta canadensis moffitti)* during 1975 and 1976 along the Columbia River in Okanogan and Douglas counties, Washington, we located six nests in which stones or pine cones *(Pinus ponderosa)* had been incorporated within the clutches. During a 20 year study along the Columbia River, Hanson and Eberhardt (Wildl. Mon. No. 28, 1971) located two Canada Goose nests which consisted entirely of rocks and reported that geese incubated these objects. We have been unable to find any literature reference reporting rocks or other objects incorporated within clutches of Canada Geese.

During the 1975 and 1976 nesting seasons, four goose nests, located on a cobblestone substrate, contained smooth egg-sized rocks within the clutches (Figure 1). Three of these nests contained a single rock, whereas the fourth contained two rocks. At a different location, on an island with a pine needle-littered substrate, two nests containing pine cones were located. One nest (1975) at first contained two pine cones and one egg; subsequently the pine cones were removed, presumably by the geese, and four additional eggs were laid. The following season a nest containing eight pine cones and no eggs was found on the same island.

One nest which had 5 eggs and one rock in it on 20 April 1975 had 5 eggs and 2 rocks in it on 6 May 1975. This was the only nest for which even a partial order of incorporation could be determined.

We wish to thank David A. Manuwal and Laurence C. Binford for critically reading the manuscript.

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Figure 1. Canada Goose nest with one rock incorporated within a clutch of six eggs, Columbia River, Washington, 1975.

Photo by R. L. Knight

ADDITIONS TO THE LIST OF NECTAR FEEDING BIRDS

SALLY HOYT SPOFFORD, Aguila-Rancho, Portal, Arizona 85632

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The list of partially nectarivorous birds reported by Fisk and Steen (Condor 78:269-271, 1976) is increased substantially by including some more recent observations and some species included in papers that have appeared since the original list was accepted for publication.

Frequent visitors to the numerous man-made nectar (sugar-water) feeders maintained by Spofford at Aguila-Rancho in Portal, Arizona, have included several species already listed by Fisk and Steen (op. cit.) including Hooded, Scott's and Northern orioles, Black-headed Grosbeak, House Finch and Cactus Wren. With this note we would like to add Painted Redstart (Spofford, North Am. Bird Bander 1:29, 1976) and the following previously unreported species: Acorn Woodpecker, Bridled Titmouse, Bewick's Wren, Ruby-crowned Kinglet, Western Tanager, Summer Tanager, Rose-breasted Grosbeak, Lazuli Bunting and American Goldfinch. At the Spofford home in Etna, New York, during the summers of 1975 and 1976, the Gray Catbird was a regular customer at hummingbird feeders and the Downy Woodpecker and Blue Jay were not uncommon visitors. The Acorn Woodpecker has also been observed feeding on the nectar of the Silk Oak *(Grevillea robusta)* in California by Ruth Troetschler (pers. comm.).

Donald W. Lamm has notified us that regular users of his nectar feeders in Tucson, Arizona, include, in addition to the House Finch and three species of

Painted Redstart *(Myioborus pictus)* at sugar-water feeder in Portal, Arizona, February, 1975. *Photo by S. H. Spofford*

Table 1. Species of North American birds, exclusive of hummingbirds, known to feed on nectar. This list supplements Table 1 of Fisk and Steen (Condor 78:269-271, 1976).

FAMILY and SPECIES	NECTAR SOURCE	LOCALITY
PSITTACIDAE		
White-fronted Parrot *Amazona albifrons*	Flowers	Costa Rica
PICIDAE		
Common Flicker *Colaptes auratus*	Feeders	Arizona
Gila Woodpecker *Melanerpes uropygialis*	Feeders	Arizona
Acorn Woodpecker	Flowers	California
M. formicivorus	Feeders	Arizona
Yellow-bellied Sapsucker *Sphyrapicus varius*	Feeders	Vermont
Hairy Woodpecker *Picoides villosus*	Feeders	Vermont
Downy Woodpecker		New York
P. pubescens	Feeders	and Vermont
CORVIDAE		
Blue Jay *Cyanocitta cristata*	Feeders	New York
Mexican Jay *Aphelocoma ultramarina*	Feeders	Arizona
Magpie Jay *Calocitta formosa*	Flowers	Costa Rica
PARIDAE		
Chestnut-backed Chickadee *Parus rufescens*	Feeders	California
Bridled Titmouse *P. wollweberi*	Feeders	Arizona
Verdin *Auriparus flaviceps*	Feeders	Arizona
CHAMAEIDAE		
Wrentit *Chamaea fasciata*	Feeders	California
TROGLODYTIDAE		
Bewick's Wren *Thryomanes bewickii*	Feeders	Arizona
Rufous-naped Wren *Campylorhynchus rufinucha*	Flowers	Costa Rica

Table 1 continued

FAMILY and SPECIES	NECTAR SOURCE	LOCALITY
MIMIDAE		
Gray Catbird *Dumetella carolinensis*	Feeders	New York
TURDIDAE		
Clay-colored Robin *Turdus grayi*	Flowers	Costa Rica
SYLVIIDAE		
Ruby-crowned Kinglet *Regulus calendula*	Feeders	Arizona
PARULIDAE		
Orange-crowned Warbler *Vermivora celata*	Feeders	Arizona
Nashville Warbler *V. ruficapilla*	Feeders	California
Black-throated Blue Warbler *Dendroica caerulescens*	Feeders	Massachusetts and Vermont
Painted Redstart *Myioborus pictus*	Feeders	Arizona
THRAUPIDAE		
Western Tanager *Piranga ludoviciana*	Feeders	Arizona
Summer Tanager *P. rubra*	Feeders	Arizona
FRINGILLIDAE		
Rose-breasted Grosbeak *Pheucticus ludovicianus*	Feeders	Arizona
Lazuli Bunting *Passerina amoena*	Feeders	Arizona
American Goldfinch *Carduelis tristis*	Feeders	Arizona
Lesser Goldfinch *C. psaltria*	Feeders	California

orioles (Scott's, Hooded and Northern), the Gila Woodpecker, Common Flicker, Orange-crowned Warbler (in winter only) and Verdin. Verdins are also frequent patrons at hummingbird feeders at the Sahuaro Vista Guest Ranch in Tucson.

From Summerland, California, Gerrie L. Human reported (pers. comm.) the Wrentit and Lesser Goldfinch as visitors to hummingbird feeders. Common non-hummingbird guests at the Human's feeders are Hooded and Northern orioles and "the insatiable House Finches."

The Chestnut-backed Chickadee has fed at hummingbird feeders in Oakland, California, on several occasions (Sylvia Sykora pers. comm.) and Nashville Warblers have fed at sugar-water feeders in San Diego, California (Alan M. Craig pers. comm.).

Betty Downs of South Londonderry, Vermont, has informed us that she has had the Yellow-bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker and Black-throated Blue Warbler at her nectar feeders. The latter species has also been observed at feeders in Lexington, Massachusetts, by Clare Reed.

Between acceptance and publication of the manuscript by Fisk and Steen (op. cit.), two additional articles appeared referring to nectar feeding birds. One of these (Fisler, Wilson Bull. 87:421, 1975) contained observations referred to by Fisk and Steen as personal communications and in addition listed the Acorn Woodpecker and Mexican Jay. In the second paper, regarding territoriality in nectar feeding Northern Orioles in Costa Rica, Schemske (Auk 92:594-595, 1975) listed five species of birds (exclusive of hummingbirds) which were repelled from the defended feeding territories of orioles but added that it "was impossible to determine whether the intruders were seeking nectar or insects." He has since informed us that on a later trip to Costa Rica he observed Rufous-naped Wrens, Clay-colored Robins, Magpie Jays and White-fronted Parrots apparently feeding on nectar from flowers of *Combretum*. Northern Orioles were also in attendance at the *Combretum* inflorescenses and still exhibited territorial defense of the nectar source.

These additions are summarized in Table 1. The revised list includes 62 species representing 42 genera and 14 families and is sure to grow with wider use of "hummingbird feeders" and with more observers.

We wish to thank sincerely all those persons who have shared their personal observations with us in the past and encourage others to make careful records of nectar feeding by additional species at either feeders or flowers.

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Sketch by Tim Manolis

RECENT OBSERVATIONS ON THE BIRDS OF THE KOOLAU FOREST RESERVE, MAUI

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There are few published records on the occurrence and abundance of birds on the island of Maui, Hawaii. Most recent reviews (Banko 1971, Berger 1972) indicated statuses for several species different from those we observed during a two-day visit to the rain forests of Koolau Forest Reserve. The study area extends from 1.2 km northeast to 2 km northwest of Puu Alaea. Elevations range from 1860 m to 2010-2200 m at the upper edge of the forest.

The forest overstory in the reserve is composed primarily of Ohia *(Metrosideros collina)*. Fewer than 10% of the trees were in bloom at the time of our visit. The Ohia were relatively small, varying from 20 to 91 cm DBH and 4 to 12 m in height. The understory was composed of olapa (*Cheirodendron* sp.), kolea (*Suttonia* sp.), akala (*Rubus* sp.), pilo (*Coprosma* sp.), and kanawao (*Broussaisia* sp.).

Although the weather in the upper elevations of the Koolau is usually overcast and rainy, the weather throughout our two days of observation was clear and sunny with very little wind. Observations of birds were made from 0800 to 1230 on 30 April and 0800 to 1330 on 1 May, 1975. We made counts independently each day to cover as much ground as possible. We recorded all birds seen and heard during 18 half-hour observational periods at 18 different stations. Individuals presumably were recorded only once during each count period, and additional observations were made between count periods.

We found nine species of birds in Koolau Forest Reserve (Table 1). Their abundance is indicated on the basis of the number of birds that an experienced observer might expect to hear and/or see in a day's birding, under excellent conditions, in the area we visited: Abundant—more than 100 birds; very common—50-100 birds; common—10-49 birds; uncommon—2-9 birds; rare—0-1 birds. Using the most abundant bird observed, the Apapane, as the standard, we calculated the "relative abundance" of each species by dividing the number of each species observed during 18 half-hour periods by the number of Apapane observed during the same periods.

RED-BILLED LEIOTHRIX. This species was outnumbered by the Apapane by 75 to 1. In addition to the observations made during the count periods, we heard birds of this species at higher elevations on several occasions and saw them twice.

JAPANESE WHITE-EYE. We observed this species 16 times during the two days of observations, but only once during the 30-minute observational periods. It was outnumbered by about 450 to 1 by the Apapane.

AMAKIHI. This species was seen throughout the area at all elevations. It was nowhere numerous and was outnumbered by Apapane during our station counts by 21 to 1.

CREEPER. The Creeper is an abundant bird at all elevations and second in abundance only to the Apapane, which outnumbered it about two to one. As many as 10 birds were observed in a single social group. This species has been classified on Maui as being relatively common on the windward slopes of Haleakala (Berger 1972), status undetermined (Banko 1971) and "undoubtedly restricted in range, but relatively common at least in the Kipahulu Valley" (IUCN 1970). We found Creepers to be much more common on Maui than they are on either Kauai

Table 1. Birds seen in the Koolau Forest Reserve, Maui, Hawaii on 30 April and 1 May 1975.

SPECIES	ABUNDANCE	NO.[1] SEEN	RELATIVE ABUNDANCE	%[2] OCCURRENCE
Red-billed Leiothrix *Leiothrix lutea*	Uncommon	6	.01	5.6
Japanese White-eye *Zosterops japonica*	Uncommon	1	.002[3]	5.6
Amakihi *Loxops virens*	Common	21	.05	77.8
Creeper *Loxops maculata*	Abundant	192	.43	91.4
Akepa *Loxops coccinea*	Rare	1	.002	5.6
Maui Parrotbill *Pseudonestor xanthophrys*	Rare	1[4]	—	—
Apapane *Himatione sanguinea*	Abundant	450	1.00	100.0
Crested Honeycreeper *Palmeria dolei*	Very common	60	.13	72.2
Iiwi *Vestiaria coccinea*	Abundant	120	.27	88.9

1. Total seen during 18 half-hour count periods.
2. Percentage of half-hour count periods during which species was seen.
3. More abundant than observations during count period indicate. Heard and seen on several additional occasions during two-day period.
4. Not seen during count period, but this single bird was seen during our two-day visit.

or Hawaii. The ratio of Creepers to Amakihi observed, nine to one, is considerably different from the ratios on Kauai and Hawaii where, in our experience, the Creeper is always less abundant than the Amakihi.

The Maui Creepers were much more vocal than either the Hawaii Island subspecies *(L. maculata mana)* or the Kauai subspecies *(L. m. maculata)*, frequently giving a "chip" call. They also approached observers more readily than do birds of the other two subspecies.

We observed that Creepers on Maui used a much wider variety of foraging substrates than this species uses on Hawaii. They used small twigs and branches rather than the larger branches and trunks so characteristic of the Hawaii Island and Kauai birds (Scott and Sincock unpublished data). The variety of substrates (e.g., size and position of branches) used as foraging substrates by Maui Creepers and their more restrictive foraging patterns on other islands pose a very interesting problem for the behavioral ecologist. Comparison of foraging niche breadth and the frequency of agonistic encounters between this species and the Amakihi where they occur in varying ratios on Maui, Hawaii and Kauai (and inter-island comparisons of these measures, when placed in an ecological context) might provide insights into the varying abundance of these species on different islands.

AKEPA. This species has been classified on Maui as being rare (Berger 1972), as extremely rare or possibly extinct (IUCN 1970), and as endangered (USFWS 1975). Previous to this census there were only three records of the Akepa on Maui in this century. Three Akapa were reported between 610 and 915 m in the Koa *(Acacia koa)* forests of southeastern Maui (Richards and Baldwin 1953). A single adult male was reported at 1892 m on the north slope of Haleakala in the Koolau Forest Reserve on 18 November 1970 by Dave Woodside (pers. comm.) and was also reported by Casey (1973). A single male at 204 m in a forested ridge above Kipahulu Valley was seen on 17 July 1972 (Casey 1973). This species was not observed during the month-long Kipahulu Valley expedition in 1967 (W. Banko pers. comm.) and only once during the 1973 Hana Rain Forest project (T. Casey pers. comm.).

In view of the limited number of observations of Akepa on Maui during this century, the sighting of what was believed to be an adult male, as determined by its relatively solid wash of reddish-orange over medium brown color, at 1646 m immediately below Puu Alaea on 30 April, and an Akepa, believed to be an immature male because of behavior and a lesser amount of reddish-orange coloration, 1 km east of Puu Alaea at 1707 m on 1 May by John Sincock, are of interest. Both birds were observed for about two minutes feeding in the outer canopy of Ohia trees.

MAUI PARROTBILL. The first record for this century was of a single bird near Puu Alaea at 1950 m elevation (Richards and Baldwin 1953). A second bird was recorded during the Kipahulu Valley expedition (Banko 1968). Three birds were recorded in the vicinity of Puu Alaea in April 1974 (Shallenberger 1974). We observed a single Maui Parrotbill at 1833 m. It was observed at a distance of 8 m for 2 to 3 minutes by two observers (J. M. Scott and Joe Medeiros) and was moving slowly over a 12 cm diameter horizontal branch 3 m up an unidentified tree. We identified the bird as a parrotbill by the large parrotlike bill and the prominent superciliary stripe. The bill appeared quite large for the body size and the lower mandible appeared lighter than the upper.

APAPANE. The Apapane was the most abundant bird seen during our two day trip and was found at all elevations. We saw as many as 50 birds during a 30-minute count period, and a large percentage of the birds were immature.

CRESTED HONEYCREEPER. Very little is known about this species (Berger 1972). It has been considered rare (IUCN 1970) and endangered (USFWS 1975). "Several individuals" were seen at 1768 m 1.1 km northwest of Puu Alaea on 23 November 1943 and a total of 5-6 heard and seen in this same area between 1920 and 2043 m on three different dates in December 1950 (Richards and Baldwin 1953). It was observed only at the higher elevations (above 1840 m) during the Kipahulu Valley expedition and was given a relative abundance scale of 0.01 with the Apapane being given a 10.0 (Warner 1967). Only one or two sightings were recorded per man day in Upper Kipahulu Valley (Warner 1967); however, W. Banko (pers. comm.) observed from one to as many as a half dozen or more at any single instance in the same general area and during the same period as Warner's (1967) observations.

During the two days we spent in the Koolau Forest Reserve we saw and heard over 100 Crested Honeycreepers. They were heard and seen more frequently on the second day, but this was undoubtedly because we were more familiar with their call by that time. The Crested Honeycreeper was outnumbered by the Apapane by 7.5 to 1 and was the fourth most abundant bird we observed. We encountered Crested Honeycreepers shortly after we entered the forest at treeline and continued to observe them down to 1860 m, the lowest elevation we visited. We saw Crested Honeycreepers more frequently at the lower elevations where they were often foraging in the under-canopy of Ohia trees. Among these foraging

birds were two adults accompanying an immature bird; one of the adults was observed feeding the young bird. The number of birds that we observed and similar observations by the 1973 Hana Rain Forest Project (T. Casey pers. comm.) suggest that Crested Honeycreepers are much more common than formerly indicated (Richards and Baldwin 1953, Banko 1971, Warner 1967, Berger 1972). However, the differences in the numbers we saw and those seen by earlier observers may simply reflect the ideal weather conditions we had and/or seasonal variations in distributional patterns rather than any real change in the numbers of Crested Honeycreepers. Their known range extends from the southwestern rim of Kipahulu Valley, east and north around Maui to 2.0 km northwest of Puu Alaea. The species is restricted to areas at higher elevations (above 1840 m) in the Kipahulu Valley (Warner 1967). We did not reach its lower limits in Koolau Forest Reserve. Seemingly suitable habitat is found to the northwest of its present limits but additional field work is needed to determine whether the Crested Honeycreeper is found there.

IIWI. The Iiwi was an abundant bird at all elevations. We saw as many as 20 birds during a single 30-minute count period. The Iiwi was the third commonest bird we encountered during our two days of observation in the forest, and was outnumbered about 4 to 1 by Apapane. It was seen on all but two of the 30-minute count periods.

The low numbers of exotic species seen was surprising, but our observations were for only a brief period in a single season. Studies at other times of the year may show differences in numbers and relative abundance of the species seen.

ACKNOWLEDGMENTS

We wish to acknowledge the help of Joe Medeiros of the Hawaii Division of Fish and Game for providing logistic support during our trip into the forest. A. J. Berger and C. Van Riper reviewed an earlier draft of this manuscript.

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A SEPTEMBER RECORD OF THE BOREAL OWL IN MONTANA

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The status of the Boreal Owl *(Aegolius funereus)* in the western United States has been summarized by Kuchel and Garrott (Western Birds 6:21-23, 1975) and Johnson and Hudson (Auk 93:195-196, 1976). Summer month sightings in Montana consist solely of a family group observed by David Shea at Waterton Lake, near the Canadian border in July 1973 (Skaar, Montana bird distribution, Bozeman, Montana, 1975), and there is only one early fall record, a specimen collected near Bozeman in September 1964 (Skaar, Birds of the Bozeman latilong, 1969).

It was of interest therefore to find a Boreal Owl on 12 September 1976 while I was working on a wildlife inventory and habitat typing project for the Deerlodge National Forest. The site was in a dense stand of Engelmann Spruce *(Picea engelmannii)* surrounding Albicaulis Lake, Powell County, in the Flint Creek Range about 27 km west of Deerlodge, Montana, and about 320 km south of Waterton Lake. The elevation is 2440 m.

When found, the bird was perched about 3 m above the ground in a dense spruce cover, a preferred roosting situation according to Catling (Can. Field Nat. 86:223-232, 1972). The bird was quite tame and seemed totally unconcerned with my presence, allowing me to take several photographs from about 2 m distance (Figure 1). The owl was about 20 cm in length and showed the light beak and dark facial border characteristic of the Boreal Owl.

Accepted 6 October 1977

Figure 1. Boreal Owl, Albicaulis Lake, Powell County, Montana, 12 September 1976.

REVIEW

BIRDWATCHER'S GUIDE TO WILDLIFE SANCTUARIES. Jessie Kitching. 1976. Arco Publishing Company, New York. xv + 233 p., 20 black and white photos. $8.95.

This interesting little volume describes 295 wildlife sanctuaries in the United States and Canada. The author's aim is to present useful information about "...most of the major and many of the smaller sanctuaries that will admit the public..."

The sanctuaries and refuges are listed alphabetically by state. Address and directions for reaching each sanctuary are given first, followed by a brief list of rare or endangered species that occur, and an equally brief list of common species. A brief description of the refuge is then given, usually including other biological, historical or geological points of interest, activities allowed and precautions that should be taken. Also included are the dates and authors of refuge checklists.

I assume this book was written to aid the traveler in planning a bird watching trip to any part of the country. In this regard I feel the book would have limited usefulness. Usually only 3-5 rare or endangered species are listed. These include birds on the federal endangered species list and also those that are only rare on the refuge in question. Often birds are listed that one could not expect to find at the same location in a lifetime, e.g., a Yellow-green Vireo at Silverwood Wildlife Sanctuary near San Diego or a Garganey at El Dorado Nature Center at Long Beach. At other times birds listed as rare for a refuge may be common just a few miles away. This book would not help you find these species. The list of common species is usually no more than 12 species long. It may or may not have the most characteristic birds of the area listed.

Another factor that must be mentioned is that this book does not present a complete list of sanctuaries or refuges. Very few state wildlife refuges are listed. Many state parks, national parks and national wildlife refuges are not included. Some glaring omissions are Malheur National Wildlife Refuge in Oregon and Carlsbad Caverns National Park in New Mexico, both well-known birding spots. In fact, three additional volumes this size would probably be necessary to treat all the wildlife sanctuaries in North America in this manner.

This book would probably be most valuable as a starting point for researching a cross country trip, with visiting scenic spots and sanctuaries foremost in mind, rather than seeing the most species of birds. If used in conjunction with Pettingill's bird finding guides and site guides published in *Birding* and *American Birds* it could possibly be a valuable book to add variety to birding trips. A collector of checklists will find this a most useful book, as it gives addresses for over 290 of them.

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BULLETIN BOARD

REQUEST FOR INFORMATION ON COWBIRD NESTLINGS

I am studying geographical variation in the gape coloration of nestling Brown-headed and Bronzed cowbirds. In some localities the rictal flanges and tomia are yellow, in other areas they are white. A preliminary report on this study will appear early in 1978 in *The Auk*. Since more information is needed, I would greatly appreciate receiving the following types of data from any location: coloration of the rictal flanges, tomia, mouth interior and eye-lids of cowbird and host nestlings

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Manuscripts should be sent to Alan M. Craig, 3532 Winston Way, Carmichael, CA 95608. For matters of style consult *Suggestions to Contributors to Western Birds* (6 pp. mimeo available at no cost from the Editor) and *CBE Style Manual*, 3rd ed., 1972 (available from American Institute of Biological Sciences, 1900 Wisconsin Ave., NW, Washington, DC 20016 for $6.00).

Papers are desired that are based upon field studies of birds, that are both understandable and useful to amateurs, and that make a significant contribution to scientific literature. Appropriate topics include distribution, migration, status, behavior, ecology, population dynamics, habitat requirements, the effects of pollution, and techniques for identifying, censusing, sound recording and photographing birds in the field. Papers of general interest will be considered regardless of their geographic origin, but particularly desired are papers dealing with studies accomplished in or bearing on Rocky Mountain states and provinces westward, including Alaska and Hawaii; adjacent portions of the Pacific Ocean and Mexico; and western Texas.

Authors are provided 50 free reprints of each paper. Additional reprints can be ordered at author's expense from the Editor when proof is returned or earlier.

Good photographs of rare and unusual birds, unaccompanied by an article but with caption including species, date, locality and other pertinent information, should be submitted to Arnold Small, 608 N. Camden Drive, Beverly Hills, CA 90210.